N°. 6. A leaf, of the common ſize, after the flower has fallen, and the ſeed-veſſel is ripe. Some of the principal nerves of the leaf are repreſented.

N°. 7. The germen, or ſeed-bud, with the ſtyle, and ſtigma, of the ſize they appear a few days after the falling off of the flower.

N°. 8. One of the leaves of the flower cup.

N°. 9. A ſeed, of its natural ſize, when ripe.

N°. 10. A filament and anthera, of the natural ſize.

N°. 11 and 12. The antheræ, at the time of their ſhedding the pollen, or fecundating duſt, burſting laterally.

N°. XLII.

Obſervations on the conſtruction of Hoſpitals, by Mr. LE ROY. *Member of the Royal Academy of Sciences—(Extracted from an Eſſay on the ſubject, which, with ſeveral elegant plans, was tranſmitted by the author to the Society, but could not be inſerted entire, as it contained many remarks of a local nature, reſpecting Paris —only.*

THE conſtruction of Hoſpitals is in general objectionable, either becauſe many of the wards do not admit of perfect ventilation, or becauſe the air paſſes from one patient over another, by which means contagious diſeaſes are often ſpread.

To avoid theſe inconveniences, a large Hoſpital ſhould conſiſt of diſtinct and ſeperate buildings, each forming one ward, erected upon arches or columns, at a conſiderable height

height from the ground, and ranged at a diſtance from each other, like the tents of an encampment.

The cieling or roof of each ward ſhould be formed into a number of ſpherical arches according to its ſize, the crown of each arch being in the middle of the breadth of the ward, and opening into a funnel like a common chimney, which ſhould be ſupplied with a vane, (reſembling that we call a cow) ſo that it may always open to leeward.

In each floor, midway as to breadth, ſhould be a row of holes at ſuitable diſtances from each other, to admit air from below, ſo conſtructed that the quantity of it may be regulated at pleaſure.

In conſequence of this ſtructure there muſt be a conſtant change of air, for that which is in the lower part of the ward, being warmed by the patients and nurſes, and the neceſſary fires, will aſcend, and in conſequence of the ſpherical conſtruction of the roof, will be directed to the openings in it, and flow through them, while the holes in the floor will afford a conſtant ſupply of freſh air, which will move rapidly as it enters the room ſo low.

A number of arches with openings is preferable to a ſingle arch in the center, becauſe the air in paſſing from the extremities of the room to the center flows, from one patient over another—and a plane or flat cieling, even with apertures, is improper, becauſe the upper air at a diſtance from the apertures cannot move to them.

The rooms may be warmed by placing grates or ſtoves over theſe holes in the floor, and no bad effect can be produced by the fire as the air and vapours will aſcend from it and go off by the holes in the cieling—If it be neceſſary to quicken the circulation of air, either on account of the ſlug iſhneſs of the atmoſphere, or of the contagious nature of any diſeaſes in the ward, ſmall fires may be fixed in

in grates or ſtoves near the openings in the cieling, to increaſe the motion of the air.

To prevent the ſpreading of contagion, as well as to keep the ſick from beholding the ſufferings of each other, a ſcreen of ſuitable height ſhould be placed between each bed.

For contagious diſorders and ſurgical caſes, there ſhould be a number of wards, at a diſtance from the Hoſpital, and to leeward of it with reſpect to the prevailing winds.

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